

XXXVI.—*Descriptions of British Aphides.*

By FRANCIS WALKER, F.L.S.

[Continued from p. 281.]

82. *Aphis Pruni.*

Aphis Pruni, Fabr. Ent. Syst. iv. 213. 14; Syst. Rhyn. 296. 14; Gmel. ed. Syst. Nat. i. 2202; Geoffr. Ins. i. 497. 10; Degeer, Ins. iii. 49. 5. t. 2. f. 1–8; Reaum. Ins. iii. t. 23. f. 9–10; Scopoli, Ent. Carn. 138. 406; Rossi, Faun. Etr. 260. 1374; Stew. El. ii. 110; Turt. ii. 704; Schrank, Faun. Boic. ii. 115. 1217; Götze, Ent. Beitr. ii. 312; Latr. Gen. Cr. iii. 173; St. Farg. et Serv. Encycl. x. 245; Kaltenbach, Mon. Pflanz. i. 52. 37; Ratz. Forst. Ins. iii. 216.

A. Arundinis, Fabr. Syst. Ins. 385. 7; Ent. Syst. iv. 212. 8; Syst. Rhyn. 295. 8; Gmel. ed. Syst. Nat. i. 2202; Kalt. Mon. Pflanz. i. 54. 38.

Prunifex, Amyot, Ann. Soc. Ent. Fr. 2^{de} série, v. 476.

Calamaphis, Amyot, Ann. Soc. Ent. Fr. 2^{de} série, v. 477.

The viviparous wingless female. This *Aphis* dwells beneath the leaves of the plum-tree (*Prunus domestica*), and is said to feed also on *P. spinosa* and on *P. Armeniaca*, from the middle of June to the end of October. It exudes much floccose matter with which the leaves on which it feeds are covered; the body is light green, elliptical, long, narrow, and thickly covered with white powder: the limbs are white: the feelers have brown tips, and are much shorter than the body: the tip of the mouth, the feet, and the tips of the shanks are brown, and the eyes are darker: the nectaries are pale green with black tips, and about one-twentieth of the length of the body: the front is rather narrow, and nearly straight: the first and second joints of the feelers are not angular; the fourth joint is very much shorter than the third; the fifth is a little shorter than the fourth; the sixth is much shorter than the fifth; the seventh is more than twice the length of the sixth. It also sometimes appears in abundance on *Arundo Phragmitis* and on *A. Epigynos*, and it assumes there a variety of tints, which will be mentioned when its history is more fully detailed.

The viviparous winged female. The pupa much resembles the larva, but is shorter, and the tips of the rudimentary wings are pale brown. The winged *Aphis* is also light green, and very much covered with white powder: the head, the middle chest, and the middle breast are black or gray: the feelers have the same colours, and vary in length, being a little shorter or much shorter than the body; the fourth joint is more than half the length of the third; the fifth is shorter than the fourth; the sixth is much shorter than the fifth; the seventh is more than

twice the length of the sixth: the eyes are dark red or black: the mouth is green or pale green; its tip and the nectaries are black, the latter are about one-twelfth or one-twentieth of the length of the body: the legs are pale green; the feet and the tips of the thighs and of the shanks are black: the wings are white or colourless and much longer than the body; the wing-ribs, the rib-veins and the wing-brands are pale green, the latter are sometimes pale brown; the other veins are brown; the first vein is more perpendicular than is usual in this group, and the second vein diverges much more from it than it does from the third; the first fork of the latter vein is a little after one-third and the second much more after two-thirds of its length; the fourth vein is curved moderately and equally throughout its length, and the angle whence it springs is very slight.

1st var. The legs are white; the feet and the tips of the shanks are brown.

The oviparous wingless female. The body is small, slender, nearly linear, rather flat, smooth, whitish green tinged with yellow, not shining: there is a dark green stripe along the back: the head is yellow: the feelers are black, pale yellow at the base and about half the length of the body: the eyes are dark red: the mouth and the nectaries are pale yellow with black tips, and the latter are hardly one-tenth of the length of the body: the legs are pale yellow and rather short; the knees, the feet and the tips of the shanks are black. On *Elymus* or *Calamagrostis arenarius*.

1st var. The body is green: the eyes are nearly black.

2nd var. The back of the body has a bluish tinge. On *Salsola Kali* in the beginning of October near Fleetwood.

The wingless male. Like the oviparous female, but smaller: the feelers are about half the length of the body.

Length of the body $\frac{1}{2}$ – $\frac{3}{4}$ line; of the wings $2\frac{1}{4}$ lines.

83. *Aphis Lythri*, Schrank.

Aphis Lythri, Schrank, Faun. Boic. ii. 1. 115. 1215; Kalt. Mon. Pfl. i. 51. 36.

Lythraphis, Amyot, Ann. Soc. Ent. Fr. 2^{de} série, v. 477.

The viviparous wingless female. This insect feeds on *Lythrum Salicaria* in the summer. It is small, pale green, oval, shining, and slightly convex: the feelers are pale yellow, and shorter than the body, their tips and the eyes are black: the mouth and the nectaries are also pale yellow with black tips, and the latter are as long as one-fourth of the body: the legs are pale yellow, and moderately long; the feet are darker. While young it is narrower and more linear. The front has three small tubercles; the first and the second joints of the feelers are not angular; the fourth is much shorter than the third; the fifth is a little shorter

than the fourth; the sixth is much shorter than the fifth; the seventh is more than twice the length of the sixth.

1st var. The body is dull yellowish green varied with red: the feelers are dull yellow, black towards their tips, and a little shorter than the body: the mouth is yellow with a black tip: the nectaries are dull yellow with black tips: the legs are yellow; the feet and the tips of the shanks are black.

Found in September, near Newcastle, by Mr. Hardy.

The viviparous winged female. The body is black and rather small: the borders and the underside of the fore-chest and the abdomen are dark yellowish green; the disc of the latter is black: the feelers and the nectaries are black, and the latter are nearly one-fifth of the length of the body: the legs are yellow; the feet and the tips of the thighs and of the shanks are black: the wings are colourless and very much longer than the body; the wing-ribs and the rib-veins are pale yellow; the brands and the veins are brown.

Length of the body $\frac{1}{2}$ line; of the wings 2 lines.

84. *Aphis Tussilaginis*, n. s.

The viviparous wingless female. This species was found in the latter part of October near Lancaster on *Tussilago Farfara*. The body is large, convex, narrow, linear and brown: the head is black: the feelers are pale yellow, and as long as the body; the tips of the joints are black: the mouth is pale yellow, and reaches the hind-hips; its tip and the eyes are black: the nectaries are pale yellow, black at the base and at the tips, and as long as one-fourth of the body: the legs are long and pale yellow; the knees, the feet, and the tips of the shanks are black. While young it is linear pale greenish yellow, and has a large lively green spot in the middle of the body.

1st var. The abdomen is yellowish brown: the feelers are black, pale brown towards the base, and nearly twice the length of the body: the nectaries are yellow with black tips; they are also black at the base, where there is a large spot of the same colour.

The viviparous winged female. The body is brown: the borders and the underside of the fore-chest are pale green: the abdomen is pale green with a row of narrow black bands along its back, and a row of black spots on each side: the feelers are black, and a little longer than the body: the mouth is pale yellow; its tip and the eyes are black: the nectaries are yellow with black tips, and as long as one-fourth of the body: the legs are long and yellow; the hind-thighs except the base, the feet, and the tips of the thighs and of the shanks are black: the wings are colourless; the wing-ribs and the rib-veins are pale yellow; the wing-brands and the other veins are brown.

85. *Aphis Dianthi*, Schrank.

Aphis Dianthi, Schrank, Faun. Boic. ii. 114. 1213; Kalt. Mon. Pfl. i. 42. 29.

A. vulgaris, Kyber, Germ. Mag. i.

A. Rapæ, Curtis, Journ. Roy. Agric. Soc. iii. 53. pl. C. fig. 1-3.

A. dubia, Curtis, Journ. Roy. Agric. Soc. iii. 54. pl. C. f. 4.

A. vastator, Smeë, The Potatoe Plant, &c. 81.

A. Solani? Kalt. Mon. Pfl. i. 15. 5.

Dianthaphis, Amyot, Ann. Soc. Ent. Fr. 2^{de} série, v. 477.

The viviparous wingless female. The body is small, oval, dull, rather flat, pale yellowish green; it has a row of punctures and a slight rim on each side: the feelers are pale yellow, black towards the tips, and a little more than half the length of the body: the mouth is pale yellow; its tip and the eyes are black: the nectaries are pale yellow with black tips, and as long as one-sixth of the body: the tube at the tip of the abdomen is also pale yellow with a darker tip: the legs are pale yellow and moderately long; the knees, the feet, and the tips of the shanks are black.

1st var. The body is mottled with red.

2nd var. The feelers are longer than the body; the tips of the latter joints are darker: the nectaries are as long as one-fourth of the body: the legs are pale yellow; the tips of the feet are darker. When young it is pale yellow, linear and flat.

3rd var. The body is pale red.

4th var. Body rose-colour: the head is almost white: the limbs are white: the eyes, the feet, the tip of the mouth, and the tips of the nectaries are black: the feelers are nearly as long as the body; the nectaries are one-fifth of its length.

5th var. The body is pale yellowish green, tinged with red: the feelers are a little shorter than the body: the nectaries are as long as one-fourth of the body: the legs are pale greenish yellow; the feet and the tips of the shanks are black.

6th var. The body is pale red, slightly streaked with black: the head is yellow: the feelers and the mouth are pale yellow with black tips, and the former are longer than the body: the nectaries are pale yellow, and as long as one-fourth of the body; its tip and the eyes are black: the legs are yellow; the knees, the feet, and the tips of the shanks are black.

7th var. The body is pale whitish green: the feelers are pale green, black towards the tips, and much shorter than the body: the eyes are dark red: the mouth and the nectaries are pale green with black tips: the legs are pale green: the feet and the tips of the shanks are darker. On *Sonchus*.

8th var. The body is grass-green and shining: the head is pale yellow: the feelers are white, black towards the tips, and rather more than half the length of the body: the mouth is white with

a black tip : the tube at the tip of the abdomen and the nectaries are white ; the latter have darker tips and are as long as one-fourth of the body : the legs are greenish white ; the knees are brown ; the feet and the tips of the shanks are black.

9th var. Like the last, but the body is deep green and mottled with dark colour : the feelers are black, yellow at the base : the nectaries are pale yellow with dark tips : the thighs are green ; the shanks are yellow, with black tips.

10th var. The nectaries are slightly spindle-shaped.

11th var. The body is yellow : the borders of the abdomen are black : the feelers are black, yellow at the base, and shorter than the body : the mouth is pale yellow ; its tip and the eyes are black : the nectaries are yellow with black tips, and as long as one-fourth of the body : the legs are pale red ; the knees, the feet, and the tips of the shanks are black. Mr. Hardy, on *Urtica urens*.

12th var. The body is dull green tinged with buff : the feelers are pale yellow, darker towards their tips, and a little shorter than the body : the eyes are dark brown : the mouth and the nectaries are pale yellow with brown tips, and the latter are as long as one-fourth of the body : the legs are also pale yellow ; the feet and the tips of the shanks are brown. On *Carduus*.

13th var. The body is small, oval, convex, pale green, not shining, whitish towards the head : the feelers are pale yellow, black towards the tips, and longer than the body : the mouth is pale yellow ; its tip and the eyes are black : the nectaries are pale yellow with black tips, and about one-fourth of the length of the body : the legs are pale yellow, and rather long ; the knees, the feet, and the tips of the shanks are black. An *Aphis* of this variety has one hind-shank much longer than the other, and black in the middle as well as at the end.

14th var. The body is rose-colour mottled with pale yellow : the head and the limbs are yellowish white : the feelers are longer than the body ; the tips of the joints are black : the eyes are very dark red : the mouth and the nectaries have black tips, and the latter are about one-fifth of the length of the body : the feet are black.

15th var. The body is green, and shining.

16th var. The body is yellow.

17th var. The body is red.

18th var. The body is bright red.

19th var. The body is pale orange.

20th var. The body is streaked with black.

21st var. The body is nearly all black.

These colours vary in intensity, and are either separate, or mixed together on the body, which is sometimes dull, sometimes shining.

The limbs also vary in colour : the feelers are rather less or

rather more than the length of the body; their colour passes from pale yellow or pale green to brown or black; the dark colour begins at the last joints and at the tip of each joint, and spreads thence over the whole feeler: the eyes are bright red, or dark red, or brown, or black: the mouth is dull yellow, or pale yellow, or green, or pale green; its tip is brown or black: the nectaries likewise vary in colour, they have black or brown tips, and are one-fourth or one-fifth of the length of the body: the legs have the same variations in colour, and also vary slightly in length; the feet and the tips of the thighs and of the shanks are brown or black; the thighs are paler than the shanks, and the dark colour in the former sometimes occupies half their length; the hind-shanks and even the hind-thighs are sometimes but very rarely brown or black: the limbs as usual are almost white when the skin has been lately shed.

The viviparous winged female. While a pupa it is red: the feelers are yellow, black towards the tips, and as long as the body: the mouth is pale yellow; its tip and the eyes are black: the nectaries are pale yellow with black tips, and as long as one-fourth of the body: the legs are pale red; the feet and the tips of the shanks are black: the rudimentary wings are whitish or pale green, or with brown or black tips. When the wings are unfolded the insect is black: the borders of the fore-chest, the fore-breast, and the abdomen are greenish yellow: the feelers are hardly shorter than the body: the mouth is pale yellow with a black tip: the nectaries are black, and as long as one-sixth of the body: the legs are pale yellow; the feet and the tips of the thighs and of the shanks are black: the wings are colourless, and much longer than the body; the wing-ribs and the rib-veins are pale brown; the other veins are brown.

1st var. The body is dull green varied with black and red: the feelers are pale yellow towards the base, and a little longer than the body.

2nd var. The body is rose-colour: the limbs and the rudimentary wings are white.

3rd var. The body is black, and very small: the abdomen is dull green: the feelers are much shorter than the body: the mouth is dull yellow with a black tip: the nectaries are black, and as long as one-sixth of the body: the legs are yellow; the feet and the tips of the thighs and of the shanks are black: the wing-ribs are pale yellow; the wing-brands and the veins are pale brown.

4th var. While a pupa it is pale greenish yellow: the feelers are yellow, brown towards the tips, and a little shorter than the body: the nectaries also are yellow with brown tips, and nearly one-fifth of the length of the body: the legs are pale yellow; the feet, and the tips of the shanks are brown.

The winged Aphis is as variable in colour as the wingless: it

is greenish black, or black, or brown, or pale brown, or bright yellow: the borders of the fore-chest and the fore-breast are yellow, or red, or reddish brown, or green: the abdomen is yellow, or green, or dark green, or reddish brown tinged with green; its disc is usually more or less black, and it has sometimes one or two rows of black dots on each side: the feelers are black, but sometimes pale green at the base: the mouth is green, or pale green, or pale yellow; its tip is black: the tube at the tip of the abdomen is yellow: the nectaries are sometimes only one-sixth of the length of the body: the greater part of the hind-thighs is sometimes black, and more rarely all the thighs are black from the middle to the tips, or even from near the base to the tips: the wing-ribs are pale yellow, or pale green, or yellowish white; the rib-veins and the wing-brands are pale yellow or pale brown; the other veins are pale brown or brown.

Length of the body $\frac{1}{2}$ line; of the wings 2 lines.

Variations in the wing-veins. The third vein has no second fork.

It feeds on the following plants:—

Thalictrum minus.	Leontodon taraxacum.
Ranunculus bulbosus.	Plantago lanceolata.
hirsutus.	Mentha hirsuta.
repens.	Heliotropium Peruvianum.
acris.	Beta vulgaris.
Aquilegia vulgaris.	maritima.
Papaver Rhæas.	Calceolaria pinnata.
Fumaria officinalis.	Callistemma.
Nasturtium officinale.	Tussilago.
Cochlearia Armoracæa.	Geranium Robertianum.
Alliaria officinalis.	Spergula arvensis.
Erysimum barbarea.	Bunias Kakile.
Capsella Bursa-pastoris.	Galium Mollugo.
Cakile maritima.	Crocus.
Brassica oleracea.	Dianthus Caryophyllus.
Rapa.	prolifer.
campestris.	Tulipa.
Napus.	Fuchsia coccinea.
Sinapis arvensis.	globosa.
alba.	micrantha.
nigra.	Narcissus.
Raphanus sativus.	Mesembryanthemum.
Raphanistrum.	Hyacinthus.
Dianthus.	Verbena.
Euphorbia Peplus.	Tropæolum tricolor.
Crepis tectorum.	Solanum tuberosum.
Potentilla anserina.	Polygonum Persicaria.
Pyrethrum inodorum.	Pimelea sylvatica.
Myosotis scorpioides.	Myrtus.
Inula dysenterica.	Citrus.
Digitalis.	Ruscus androgynus.
Sonchus.	Cactus.

And on many other hot-house, green-house, cultivated and wild plants which will be mentioned in a future notice of this Aphid.

The following extracts from the observations of Mr. William Curtis in the year 1800 refer chiefly to this species, or to *A. Malvæ*, on columbine :

“In very cold weather Aphides are oviparous, for this obvious reason: the eggs are capable of resisting cold more powerfully than the young. On the 22nd of November I found a considerable number of eggs which had been deposited in some auricula plants by a small green Aphis, which infests plants very generally, while the same *species*, on a geranium that I kept within doors, produced young. In mild winters I have observed in the month of January the same species of Aphis in great numbers on the same species of *Primula*, without doors, and all the females viviparous. These are facts that prove that all *Aphides* are not oviparous and viviparous at the same season, but that some may be wholly viviparous; that all such as are both oviparous and viviparous do not lay eggs towards the middle of autumn, nor at all during the winter, unless a certain degree of cold takes place.” “Seasons sometimes occur very irregularly indeed, on an average, perhaps, once in four or six years, in which they (the *Aphides*) are multiplied to such an extent that the usual means of diminution fail in preventing them from doing irreparable injury to certain crops. In severe winters we have no doubt but that *Aphides* are very considerably diminished; in very mild winters we know that they are very considerably increased; for they not only exist during such seasons, but continue to multiply.” “The common green Aphis, which is so generally destructive, lives during the winter season on such herbaceous plants as it remained on during the autumn, either in its egg or perfect state. If the weather be mild, it multiplies greatly on such herbage; as the spring advances, in May the males and females of these insects acquire wings: and thus the business of increase, hitherto confined, is widely and rapidly extended.”

[To be continued.]

PROCEEDINGS OF LEARNED SOCIETIES.

ZOOLOGICAL SOCIETY.

March 27, 1849.—Wm. Yarrell, Esq., Vice-President, in the Chair.

MONOGRAPH OF THE LARGE AFRICAN SPECIES OF NOCTURNAL LEPIDOPTERA BELONGING OR ALLIED TO THE GENUS SATURNIA. BY J. O. WESTWOOD, F.L.S. ETC. (Continued from p. 306.

Section C.

Sp. 13. SATURNIA EPIMETHEA. *S. alis anticis subfalcatis; subfuscis striga communi subapicali obscura extus pallide griseo*